

07-14-04

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Docket No. 9138-0092US



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Application of: LaBelle et al.

Serial No.: 10/658,541

Filing Date: September 8, 2003

Title: Nanoengineered Biophotonic Hybrid Device

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2. Form PTO 1449 (5 pages);
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Attorney Docket No. 9138-0092US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

LaBelle et al.

Serial No.: 10/658,541

Filed: September 8, 2003

For: Nanoengineered Biophotonic Hybrid Device

Group Art Unit: 1645

Examiner: Kosson, Rosanne

INFORMATION DISCLOSURE STATEMENT

**Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450**

Dear Sir:

Pursuant to 37 C.F.R. Section 1.97 - 1.99, the Applicant wishes to make the following references of record in the above-identified application. This Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. Section 1.56. These references are also listed on the enclosed PTO Form 1449 and copies are enclosed.

In the judgment of the undersigned, portions of the listed references may be material to the Examiner's consideration of the presently pending claims. However, the references have not been reviewed in sufficient detail to make any other representation and, in particular, no representation is intended as to the relative relevance between references, whether cited in this or prior statements. This statement is not a representation that the listed references have effective dates early enough to be "prior art" within the meaning of 35 U.S.C. Section 102 or Section 103.

This Information Disclosure Statement is being filed:

- ☒ within three months of the filing date of a national application; within three months of the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 in an international application; or before the mailing date of a first Office Action on the merits. 37 C.F.R. §1.97 (b)
- ☐ **after** three months of the filing date of a national application, or the date of entry into the national stage as set forth in 37 C.F.R. § 1.491 in an international application; or **after** the mailing date of a first Office Action on the merits, but **before** the mailing date of a Final Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311 (whichever occurs first), and includes (37 C.F.R. § 1.97 (c):
- ☐ the Certification under 37 C.F.R. § 1.97(e) (see "Certification" below)

OR

- ☐ the fee of \$240 set forth in 37 C.F.R. § 1.17(p) (see "Fees" below).
- ☐ **after** a Final Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311 (whichever occurs first), but before, or simultaneously with, the payment of the issue fee, and includes the Certification under 37 C.F.R. § 1.97(e) (see "Certification" below), and the Petition Fee set forth in 37 C.F.R. § 1.17(i) (see "Fees" and "Method of Payment of Fees" below). Applicants hereby petitions for consideration of the Information Disclosure Statement submitted herewith and the accompanying references in examination of the subject patent application.

CERTIFICATION

- ☐ The **undersigned** hereby certifies that each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application not more than three months prior to the filing of the Information Disclosure Statement.
- ☐ The **undersigned** hereby certifies that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign patent application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of the Information Disclosure Statement.

FEES

- ☒ **No fee** is owed by the applicant(s).
- ☐ The **IDS Fee of \$240.00** under 37 C.F.R. § 1.17(p) is enclosed herewith.

☐ The **Petition Fee of \$130.00** set forth in 37 C.F.R. § 1.17(i) is enclosed herewith.

METHOD OF PAYMENT OF FEES

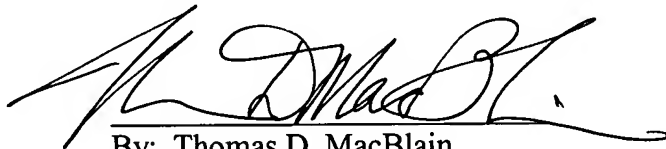
☐ Attached is a check in the amount of \$.
☐ Charge Deposit Account No. _____ in the amount of \$. (A duplicate copy of this communication is enclosed for that purpose.)

In accordance with MPEP Sections 609 and 707.05(b), it is requested the document cited be given thorough consideration and that it be cited of record in the prosecution history of the present application by initialing on Form PTO-1449. Such initialing is requested even if the Examiner does not consider a cited document to be sufficiently pertinent to use in a rejection, or otherwise does not consider it to be prior art for any reason, or even if the Examiner does not believe that the guidelines for citation have been fully complied with. This is requested so that each document becomes listed on the face of the patent issuing on the present application.

Respectfully Submitted,

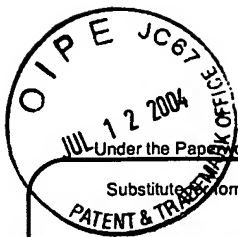
Date:

07/12/04



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PTO/SB/08A (08-03)

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Substitute for Form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 5

Complete if Known

Application Number	10/658,541
Filing Date	09/08/2003
First Named Inventor	LaBelle et al.
Art Unit	1645
Examiner Name	Kosson, Rosanne
Attorney Docket Number	9138-0092US

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
	1.	US- 3,935,031	01/27/1976	Adler	
	2.	US- 4,103,064	07/25/1978	McAlear et al.	
	3.	US- 4,149,902	04/17/1979	Mauer et al.	
	4.	US- 4,190,950	03/04/1980	Skotheim	
	5.	US- 5,466,301	11/14/1995	Hammerbacker et al.	
	6.	US- 5,504,573	04/02/1996	Cheiky-Zelina	
	7.	US- 5,573,909	11/12/1996	Singer et al.	
	8.	US- 5,711,915	01/27/1998	Siegmund et al.	
	9.	US- 5,976,892	11/02/1999	Bisconte	
	10.	US- 6,079,415	06/27/2000	Bernerd et al.	
	11.	US- 6,342,389	01/29/2002	Cubicciotti	
	12.	US- 6,476,312	11/05/2002	Barnham	
	13.	US- 6,538,191	03/25/2003	MacDonald	
	14.	US- 6,603,069	08/05/2003	Muhs et al.	
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				

Examiner
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This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Sheet	2	of	5	Attorney Docket Number	9138-0092US

NON PATENT LITERATURE DOCUMENTS			
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	15	ANDERSON, B.B. et al. "Grating Light Reflection Spectroscopy for Determination of Bulk Refractive Index and Absorbance" Anal. Chem. 1996, 68, 1081-1088.	
	16	BORREGO, C.M. et al. "Light intensity effects on pigment composition and organisation in.. " Photosynthesis Research 59; 159-166, 1999, Kluwer Academic Publishers, Netherlands.	
	17	BUNCE, J.A. "Acclimation to temperature of the response of photosynthesis to increased ..." Photosynthesis Research 64; 89-94, 2000, Kluwer Academic Publishers, Netherlands.	
	18	CEDENO, C.C. et al. "Nanoimprint lithography for organic electronics" Microelectronic Engineering 61-62, 2002 25-31.	
	19	DRAGOMAN, D. et al. "Optical modelling of quantum dots" Optics Communications 150, 1998, 331-338.	
	20	FENDLER, J.H. "Self-assembled nanostructured materials" Chem. Mater. 1996, 8, 1616-1624.	
	21	FOIDL, M. et al. "Phototrophic growth and chlorosome formation in Chloroflexus ..." Photosynthesis Research 54, 219-226, 1997, Kluwer Academic Publishers, Netherlands.	
	22	GILARDI, G. et al. "Manipulating redox systems: application to nanotechnology" TRENDS in Biotechnology Vol. 19 No. 11, Nov. 2001.	
	23	GREEN, M.A. "Prospects for photovoltaic efficiency enhancement using low-dimensional structures" Nanotechnology 11, 2000, 401-405, printed in the UK.	
	24	HALL, D.J. "An experimental approach to the dynamics of a natural population of Daphnia Galeata Mendotae" Ecology, Vol. 45, 1, Jan. 1964, 94-112.	

Examiner Signature		Date Considered	
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		First Named Inventor	LaBelle et al.
		Art Unit	1645
Examiner Name	Kosson, Rosanne		
Attorney Docket Number	9138-0092US		
Sheet	3	of	5

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	25	HE, J. et al. "Structure and optical properties of self-assembled InAs/GaAs quantum dots with..." Journal of Crystal Growth 240, 2002, 395-400.	
	26	HE, Jin-An et al. "Bacteriorhodopsin thin film assemblies - immobilization, properties and applications" Adv. Mater. 1999, 11, No. 6, 435-446.	
	27	INOUE, N. et al. "Effects of high-temperature treatments on a thermophilic Cyanobacterium Synechococcus vulcanus" Plant Cell Physiol. 41(4); 515-522 (2000).	
	28	KOTI, A.S.R. et al. "Self-Assembly of Template-Directed J-Aggregates of Porphyrin" Chemistry of Materials Vol. 15 No. 2, Jan. 28, 2003.	
	29	MURAMATSU, K. et al. "Two-Dimensional Assemblies of Colloidal SiO ₂ and TiO ₂ Particles Prepared by the ..." Journal of Colloid and Interface Science 242, 127-132 (2001).	
	30	MARUYAMA, T. et al. "Energy conversion efficiency of solar cells coated with fluorescent coloring agent" Solar Energy Materials & Solar Cells 56 (1998) 1-6.	
	31	MARUYAMA, T. et al. "Wedge-shaped light concentrator using total internal reflection" Solar Energy Materials & Solar Cells 57 (1999) 75-83.	
	32	NARAYAN, K.S. et al. "Dual function hybrid polymer-nanoparticle devices" Applied Physics Letters Vol. 74 No. 6, 8 February 1999.	
	33	OLIVE, J. et al. "Ultrastructure and light adaptation of phycobilisome mutants of Synechocystis PCC 6803" Biochimica et Biophysica Acta 1319 (1997) 275-282.	
	34	PELED, A. et al. "Photobleaching and photodeposition in a chlorophyll based solution" Synthetic Metals 115 (2000) 167-171.	

Examiner Signature	Date Considered
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Sheet	4	of	5	Attorney Docket Number	9138-0092US

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	35	PLANNER, A. et al. "The influence of rigid matrices on the processes of deactivation of excited ..." Jurnal of Photochemistry and Photobiology A: Chemistry 115 (1998) 151-155	
	36	RASMUSSEN, K.O. et al. "Nonlinear and stochastic modelling of energy transfer in Scheibe aggregates" Mathematics and Computers in simulation 40 (1996) 339-358.	
	37	SANCHEZ-CORTES, S. et al. "Influence of coverage in the surface-enhanced Raman scattering of cytosine and its methyl derivatives on ..." Surface Science 473 (2001) 133-142.	
	38	SAWICKI, D.A. et al. "Universal relationship between optical emission and absorption of complex systems: an alternative approach" Physical Review A, Vol. 54 No.6, December 19	
	39	SCHMIDT, K.A. et al. "Combined fluorescence and photovoltage studies on ... Photosynthesis Research 58; 43-55, 1998, Kluwer Academic Publishers, Printed in the Netherlands.	
	40	SOMMELING, P.M. et al. "Spectral response and IV-characterization of dye-sensitized nanocrystalline TiO ₂ solar cells" Solar Energy Materials & Solar Cells 62 (2000) 399-410.	
	41	STANGL, R. et al. "On the modeling of the dye-sensitized solar cell" Solar Energy Materials and Solar Cells 54 (1998) 255-265.	
	42	UMETSU, M. et al. "How the formation process influences the structure of ..." Photosynthesis Research 60; 229-239, 1999 Kluwer Academic Publishers, Printed in the Netherlands.	
	43	WAGNER, J. et al. "Characterization of Monodisperse Colloidal Particles: Comparison between SAXS and DLS" Langmuir 2000, 16, 4080-4085.	
	44	WEETALL, H.H. et al. "Optical and electrical characteristics of bacteriorhodopsin gelatin films and tin-oxide coated electrodes" Current Applied Physics 3 (2003) 281-291.	

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Sheet 5	of 5	Attorney Docket Number	9138-0092US

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	45	YANG, T. et al. "Creating Addressable Aqueous Microcompartments above Solid Supported Phospholipid Bilayers Using Lithographically ..." Anal. Chem. 2000, 72, 2587-2589.	
	46	Tamiaki, H. et al "Aggregation of synthetic metallochlorins in hexane. A model of chlorosomal bacteriochlorophyll self-assemblies..." Photosynthesis Research 59-67, 2002.	

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